

Cocalico School District
Year-at-a-Glance - Curriculum Overview

Department: Math

Course: Applied Calculus (143)

Grade Level: 10 - 12

Big Ideas

- To find the limit of a function numerically, algebraically, and numerically
- To use algebraic techniques to find the derivative of a function
- To use the derivative of a function to determine key points of the graph of a function
- To use algebraic techniques to find the antiderivative of a function

Units of Study	% of Course Time	Textbooks & Supplemental Materials	Assessments	Standards Addressed
• Functions, Graphs and Limits	15%	<ul style="list-style-type: none"> • <i>Calculus: An Applied Approach</i> Textbook • Supplemental Materials as selected by teacher 	<ul style="list-style-type: none"> • Unit Exam • Homework • Teacher Observation 	<ul style="list-style-type: none"> • Extension Beyond Standards
• Differentiation Techniques and Applications	30%	<ul style="list-style-type: none"> • <i>Calculus: An Applied Approach</i> Textbook • Supplemental Materials as selected by teacher 	<ul style="list-style-type: none"> • Unit Exam • Homework • Teacher Observation 	<ul style="list-style-type: none"> • Extension Beyond Standards
• Applications of the Derivative of a Function	30%	<ul style="list-style-type: none"> • <i>Calculus: An Applied Approach</i> Textbook • Supplemental Materials as selected by teacher 	<ul style="list-style-type: none"> • Unit Exam • Homework • Teacher Observation 	<ul style="list-style-type: none"> • Extension Beyond Standards
• Exponential, Logarithmic and Trigonometric Functions	15%	<ul style="list-style-type: none"> • <i>Calculus: An Applied Approach</i> Textbook • Supplemental Materials as selected by teacher 	<ul style="list-style-type: none"> • Unit Exam • Homework • Teacher Observation 	<ul style="list-style-type: none"> • Extension Beyond Standards
• Integration and Its Applications	10%	<ul style="list-style-type: none"> • <i>Calculus: An Applied Approach</i> Textbook • Supplemental Materials as selected by teacher 	<ul style="list-style-type: none"> • Unit Exam • Homework • Teacher Observation 	<ul style="list-style-type: none"> • Extension Beyond Standards

Extension Beyond Standards means that the course goes beyond the given state standards.



Eagle P.A.C.T. Course Connections:

In Applied Calculus, students will use problem solving skills as they study topics that include polynomial, rational, radical, exponential, logarithmic and other functions. Additional topics included will be the limits, derivatives and anti-derivatives of those functions and numerous applications to science, business, economics and life and social science. Students will have opportunities to work together to collaborate and communicate their thinking about calculus.